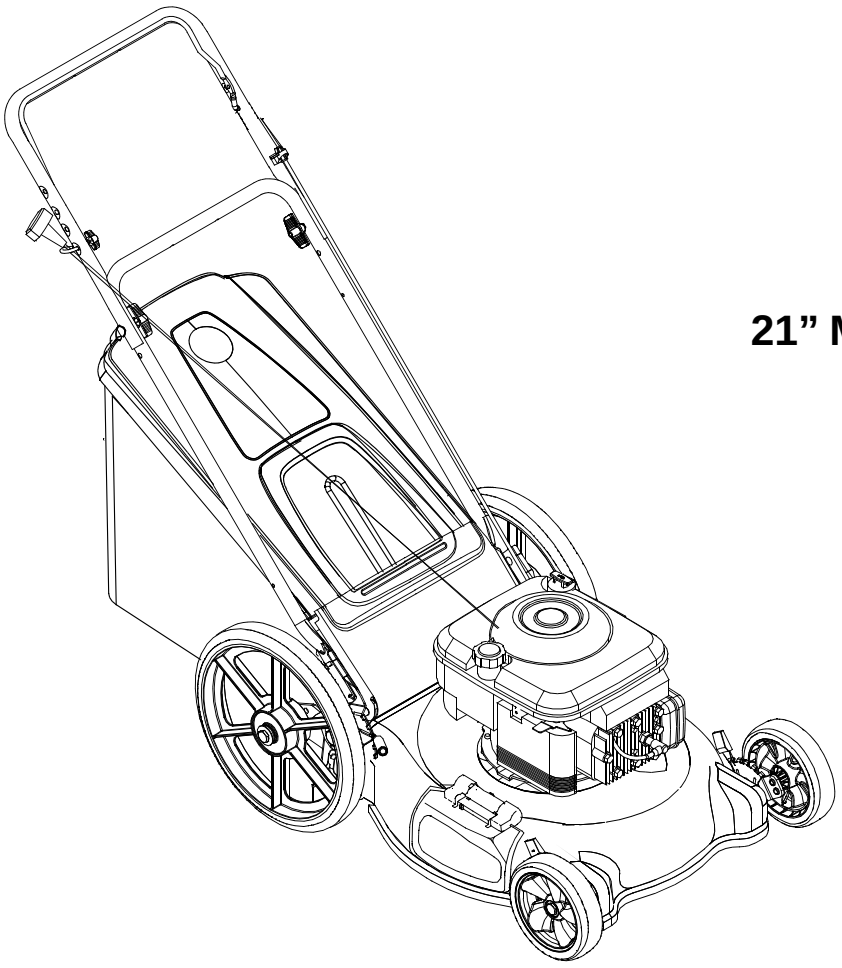
Operator's Manual



21" Mulching Mower

Model 549

Warning: This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator. In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service dealer or contact the service department, P.O. Box 361131 Cleveland, Ohio 44136-0019.

MTD LLC, P.O. BOX 361131 CLEVELAND, OHIO 44136-0019

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FINDING MODEL NUMBER

This Operator's Manual is an important part of your new lawn mower. It will help you assemble, prepare and maintain the unit for best performance. Please read and understand what it says.

Before you start assembling your new equipment, please locate the model plate on the equipment and copy the information from it in the space provided below. A sample model plate is also given below. You can locate the model plate by standing at the operating position and looking down at the rear of the deck. This information will be necessary to use the manufacturer's web site and/or help from the Customer Support Department or an authorized service dealer.

Copy the model number here: _____

Copy the serial number here: _____

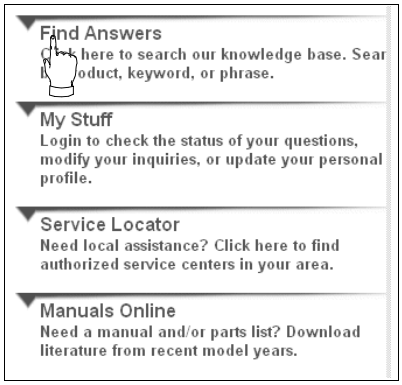
CUSTOMER SUPPORT

Please do NOT return the unit to the retailer from where it was purchased, without first contacting Customer Support.

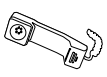
If you have difficulty assembling this product or have any questions regarding the controls, operation or maintenance of this unit, you can seek help from the experts. Choose from the options below:

Visit **yardman.com** for many useful suggestions. Click on Customer Support button and you will get the four options reproduced here. Click on the appropriate button and help is immediately available.

The answer you are looking for could be just a mouse click away!


Find Answers
Click here to search our knowledge base. Search by product, keyword, or phrase.
My Stuff
Login to check the status of your questions, modify your inquiries, or update your personal profile.
Service Locator
Need local assistance? Click here to find authorized service centers in your area.
Manuals Online
Need a manual and/or parts list? Download literature from recent model years.

The answer you are looking for could be just a mouse click away!



To reach a Customer Support Representative, please call **1(800) 800-7310**.

The **engine** manufacturer is responsible for all engine-related issues with regards to performance, power-rating, specifications, warranty and service. Please refer to the engine manufacturer's Owner's/Operator's Manual, packed separately with your unit, for more information.

SECTION 1: IMPORTANT SAFE OPERATION PRACTICES

WARNING: This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate this machine. Failure to comply with these instructions may result in personal injury. When you see this symbol—HEED ITS WARNING.

WARNING: Engine exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to State of California to cause cancer and birth defects or other reproductive harm.

WARNING: This machine was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

General Operation

1. Read this operator's manual carefully in its entirety before attempting to assemble this machine. Read, understand, and follow all instructions on the machine and in the manual(s) before operation. Be completely familiar with the controls and the proper use of this machine before operating it. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. This machine is a precision piece of power equipment, not a plaything. Therefore, exercise extreme caution at all times. Your unit has been designed to perform one job: to mow grass. Do not use it for any other purpose.
3. Never allow children under 14 years old to operate this machine. Children 14 years old and over should read and understand the operation instructions and safety rules in this manual and should be trained and supervised by a parent. Only responsible individuals who are familiar with these safe operation rules should use this machine.
4. Thoroughly inspect the area where equipment is to be used. Remove all stones, sticks, wire, bones, toys and other foreign objects which could be tripped over or picked up and thrown by the blade. Thrown objects can cause serious personal injury. Plan your mowing pattern to avoid discharge of material toward roads, sidewalks, bystanders and the like. Also, avoid discharging material against a wall or obstruction which may cause discharged material to ricochet back toward the operator.
5. To help avoid blade contact or a thrown object injury, stay in the operator zone behind the handles and keep bystanders, helpers, children and pets at least 75 feet from the machine while it is in operation. Stop machine if anyone enters the area.
6. Always wear safety glasses to protect your eyes during equipment operation and while performing an adjustment or repair. Thrown objects which ricochet can cause serious injury to the eyes.
7. Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts. Shirts and pants that cover the arms and legs and steel-toed shoes are recommended. Never operate this machine in bare feet, sandals, slippery or light weight (e.g. canvas) shoes.
8. Do not put hands or feet near rotating parts or under the cutting deck. Contact with the blade can amputate hands and feet.
9. A missing or damaged discharge cover can cause blade contact or thrown object injuries.
10. Many injuries occur as a result of the mower being pulled over the foot during a fall caused by slipping or tripping. Do not hold on to the mower if you are falling; release the handle immediately.
11. Never pull the mower back toward you while you are walking. If you must back the mower away from a wall or obstruction first look down and behind to avoid tripping and then follow these steps:
    a. Step back from the mower to fully extend your arms.
    b. Be sure you are well balanced with sure footing.
    c. Pull the mower back slowly, no more than half way toward you.
    d. Repeat these steps as needed.
5. Do not operate the mower while under the influence of alcohol or drugs.
6. Do not engage the self-propelled mechanism on units so equipped while starting engine.
7. The blade control handle is a safety device. Never attempt to bypass its operation. Doing so makes the safety device inoperative and may result in personal injury through contact with the rotating blade. The blade control handle must operate easily in both directions and automatically return to the disengaged position when released.
8. Never operate the mower in wet grass. Always be sure of your footing. A slip and fall can cause serious personal injury. If you feel you are losing your footing, release the blade control handle

immediately and the blade will stop rotating within three seconds.
9. Mow in daylight or good artificial light; walk, not run.
10. Stop the blade when crossing gravel drives, walkways or roads.
11. If the equipment should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
12. Shut the engine off and wait until the blade comes to a complete stop before removing the grass catcher or unclogging the chute. The cutting blade continues to rotate for a few seconds after the engine is shut off. Never place any part of the body in the blade area until you are sure the blade has stopped rotating.
13. Never operate mower without proper trail shield, discharge cover, grass catcher, blade control handle or other safety protective devices in place and working. Never operate mower with damaged safety devices. Failure to do so can result in personal injury.
14. Muffler and engine become hot and can cause a burn. Do not touch.
15. Only use parts and accessories made by the original equipment manufacturer (O.E.M). Failure to do so can result in personal injury.
16. If situations occur which are not covered in this manual, use care and good judgment. Contact your dealer for assistance. Call 1-800-800-7310 for the name of your nearest dealer.

Slope Operation

Slopes are a major factor related to slip and fall accidents which can result in severe injury. Operation on slopes requires extra caution. If you feel uneasy on a slope, do not mow it. Before operating this unit on a slope or hilly area, use the slope gauge on page 6 to measure slopes. If the slope is greater than 15 degrees, do not mow it.

Do:

1. Mow across the face of slopes; never up and down. Exercise caution when changing direction.
2. Watch for holes, ruts, rocks, hidden objects, or bumps which can cause you to slip or trip. Tall grass can hide obstacles.
3. Always be sure of your footing. A slip and fall can cause serious personal injury. If you feel you are losing your balance, release the blade control handle immediately, and the blade will stop rotating within 3 seconds.

Do Not:

1. Do not mow near drop-offs, ditches or embankments, you could lose your footing or balance.
2. Do not mow slopes greater than 15 degrees as shown on the slope gauge.
3. Do not mow on wet grass. Unstable footing could cause slipping.

Children

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the mower and the mowing activity. They do not understand the dangers. Never assume that children will remain where you last saw them.

1. Keep children out of the mowing area and under the watchful care of a responsible adult other than the operator.
2. Be alert and turn mower off if a child enters the area.
3. Before and while moving backwards, look behind and down for small children.
4. Use extreme care when approaching blind corners, doorways, shrubs, trees, or other objects that may obscure your vision of a child who may run into the mower.
5. Keep children away from hot or running engines. They can suffer burns from a hot muffler.
6. Never allow children under 14 years old to operate a power mower. Children 14 years old and over should read and understand the operation instructions and safety rules in this manual and should be trained and supervised by a parent.

Service

Safe Handling of Gasoline:

1. To avoid personal injury or property damage use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Serious personal injury can occur when gasoline is spilled on yourself or your clothes which can ignite.
2. Wash your skin and change clothes immediately.
3. Use only an approved gasoline container.
4. Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.
5. If possible, remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.
6. Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.
7. Extinguish all cigarettes, cigars, pipes and other sources of ignition.
8. Never fuel machine indoors because flammable vapors will accumulate in the area.
9. Never remove gas cap or add fuel while the engine is hot or running. Allow engine to cool at least two minutes before refueling.

10. Never over fill fuel tank. Fill tank to no more than ½ inch below bottom of filler neck to provide space for fuel expansion.
11. Replace gasoline cap and tighten securely.
12. If gasoline is spilled, wipe it off the engine and equipment. Move unit to another area. Wait 5 minutes before starting the engine.
13. Never store the machine or fuel container inside where there is an open flame, spark or pilot light as on a water heater, space heater, furnace, clothes dryer or other gas appliances.
14. To reduce fire hazard, keep mower free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage and remove any fuel soaked debris.
15. Allow mower to cool 5 minutes before storing.

General Service:

1. Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
2. Before cleaning, repairing, or inspecting, make certain the blade and all moving parts have stopped. Disconnect the spark plug wire and ground against the engine to prevent unintended starting.
3. Check the blade and engine mounting bolts at frequent intervals for proper tightness. Also, visually inspect blade for damage (e.g., bent, cracked, worn) Replace blade with the original equipment manufacture's (O.E.M.) blade only, listed in this manual. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
4. Mower blades are sharp and can cut. Wrap the blade or wear gloves, and use extra caution when servicing them.
5. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
6. Never tamper with safety devices. Check their proper operation regularly.
7. After striking a foreign object, stop the engine, disconnect the spark plug wire and ground against the engine. Thoroughly inspect the mower for any damage. Repair the damage before starting and operating the mower.
8. Never attempt to make a wheel or cutting height adjustment while the engine is running.
9. Grass catcher components, discharge cover, and trail shield are subject to wear and damage which could expose moving parts or allow objects to be thrown. For safety protection, frequently check components and replace immediately with original equipment manufacturer's (O.E.M.) parts only, listed here. Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety.
10. Do not change the engine governor setting or overspeed the engine. The governor controls the maximum safe operating speed of the engine.
11. Maintain or replace safety and instruction labels, as necessary.
12. Observe proper disposal laws and regulations. Improper disposal of fluids and materials can harm the environment.

Your Responsibility

- Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.

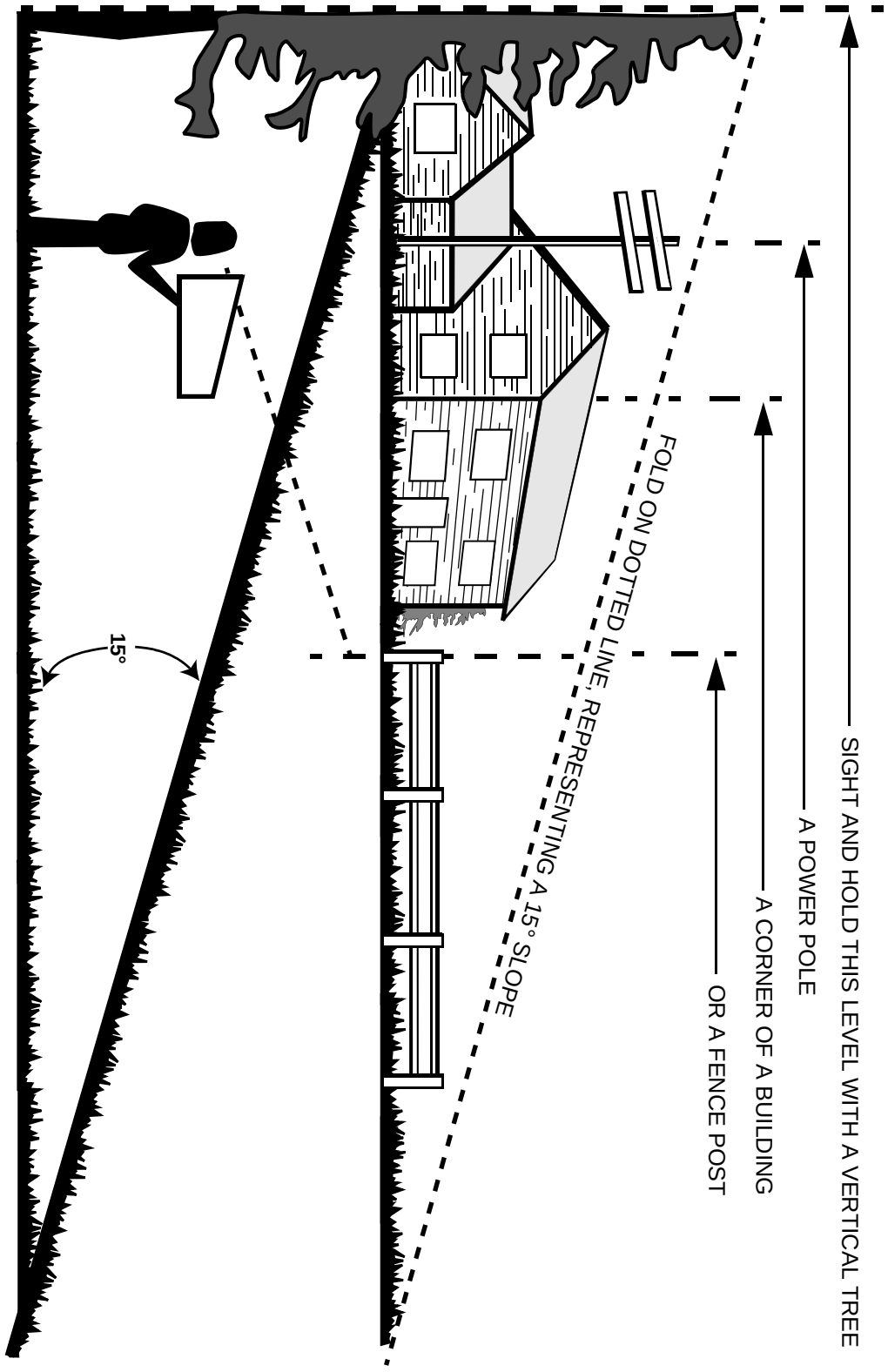
TO REDUCE THE RISK OF INJURY, DO NOT OPERATE MOWER UNLESS DISCHARGE CHUTE COVER OR GRASS CATCHER IS IN ITS PROPER PLACE.
DANGER
KEEP HANDS and FEET AWAY

DANGER
AVOID SERIOUS INJURY OR DEATH
• KEEP HANDS AND FEET AWAY FROM ROTATING PARTS.
• REMOVE OBJECTS THAT CAN BE THROWN BY THE BLADE IN ANY DIRECTION. WEAR SAFETY GLASSES.
• DO NOT MOW WHEN CHILDREN OR OTHERS ARE AROUND.
• USE EXTRA CAUTION ON SLOPES. DO NOT MOW SLOPES GREATER THAN 15°. MOW ACROSS, NEVER UP AND DOWN. NEVER PULL MOWER CLOSE TO YOUR FEET. LOOK DOWN AND BEHIND BEFORE AND WHILE MOVING BACKWARDS.
MAX 15°
READ OPERATOR'S MANUAL. KEEP SAFETY DEVICES (BLADE CONTROL TRAILING SHIELD, DISCHARGE COVER ETC.) IN PLACE AND WORKING.

WARNING
TO REDUCE THE RISK OF INJURY, DO NOT OPERATE MOWER UNLESS THIS GUARD OR ENTIRE GRASS CATCHER IS IN ITS PROPER PLACE.

SECTION 2: SLOPE GAUGE

Use this page as a guide to determine slopes where you may not operate safely. **Do not operate** your lawn mower on such slopes.


SIGHT AND HOLD THIS LEVEL WITH A VERTICAL TREE
A POWER POLE
A CORNER OF A BUILDING
OR A FENCE POST
FOLD ON DOTTED LINE, REPRESENTING A 15° SLOPE
15°

WARNING

Do not mow on inclines with a slope in excess of 15 degrees (a rise of approximately 2-1/2 feet every 10 feet). A riding mower could overturn and cause serious injury. If operating a walk-behind mower on such a slope, it is extremely difficult to maintain your footing and you could slip, resulting in serious injury.

Operate RIDING mowers up and down slopes, never across the face of slopes.

Operate WALK-BEHIND mowers across the face of slopes, never up and down slopes.

SECTION 3: ASSEMBLING YOUR LAWN MOWER

Removing Unit From Carton

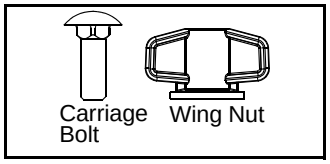
- Remove staples, break glue on top flaps, or cut tape at carton end and open carton.
- Remove loose parts if included with unit (i.e., operator's manual, etc.)
- Cut along corners, lay the carton down flat, and remove all packing material.
- Roll or slide unit out of carton and check carton thoroughly for loose parts.

Loose Parts in Carton

- Grass Bag
- Side Discharge Chute
- Rear Wheels
- Hardware Pack
- Bottle of Oil

Hardware Pack

Please identify each piece of the hardware pack as shown here.



Before Assembly

- Before setting up your lawn mower, disconnect the spark plug wire from the spark plug. See Figure 1.

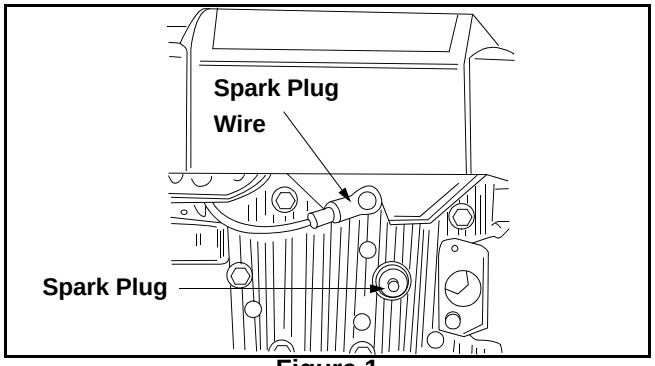


Figure 1

NOTE: *Reference to right or left hand side of the mower is observed from the operating position.*

Setting Up Your Lawn Mower

Assembling Handle

- Lift up and pull back on the upper handle to raise the handle into the operating position. See Figure 2. Make certain the lower handle is seated securely into the handle bracket assemblies.

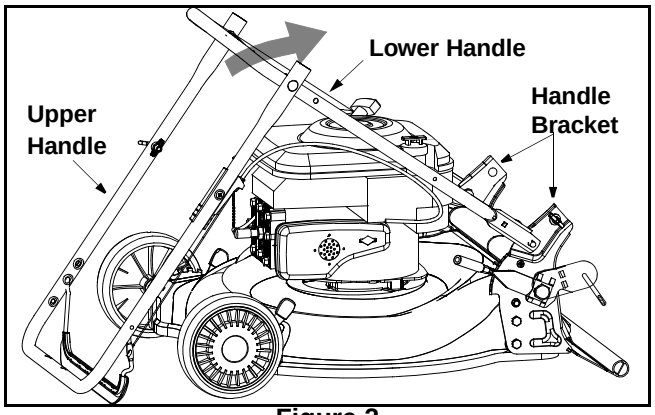


Figure 2

- Make sure that carriage bolt through the upper and lower handles on each side is properly seated. Tighten the wing nuts. See Figure 3.

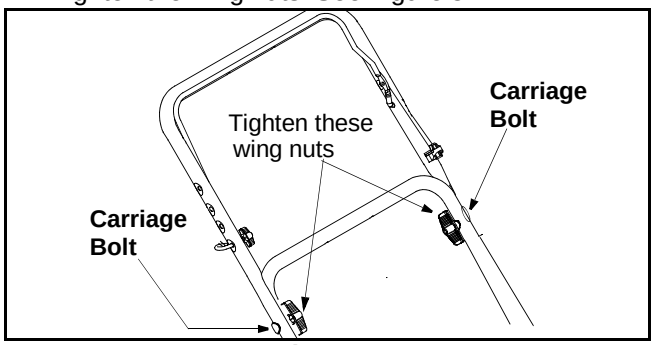


Figure 3

- Remove hairpin clip from the outer hole of the weld pin on each handle brackets. Using a pair of pliers, squeeze one leg of the lower handle against the handle bracket. Insert the hairpin clip into the inner hole on the weld pin. Repeat on the other side. See Figure 4.

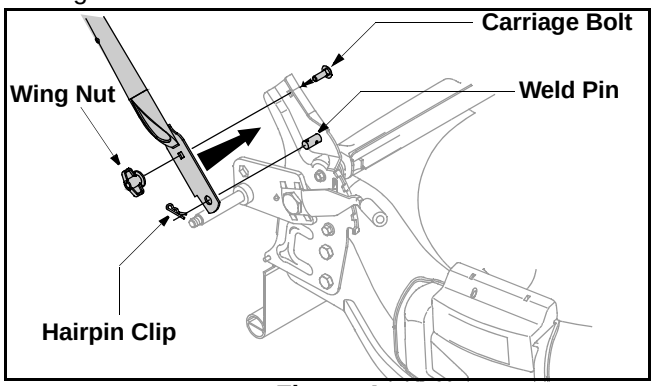


Figure 4

- After moving the hairpin clip, insert the carriage bolt, from the hardware pack, in the upper hole on the handle mounting bracket and secure with plastic wing nut from the hardware pack. See Figure 4. Repeat on the other side.

- Fasten the cable to the lower handle with the two cable ties found on the lower handle. Pull the cable ties tight and trim off the excess. See Figure 5.

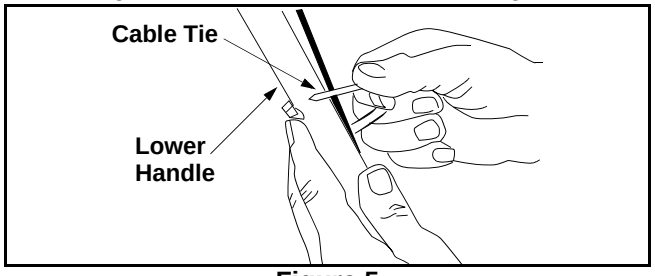


Figure 5

NOTE: *Your mower is shipped with the handle in the higher position. If you wish to lower the height of the handle, refer to the Adjustment Section at this time.*

Attaching Rear Wheels

- Remove the hex flanged nut on the rear axle from each side (leave the spring washer in place) and place the rear wheel on the axle. See Figure 6. Reinsert the flanged nut into the axle as shown, and tighten securely. Repeat on other side.

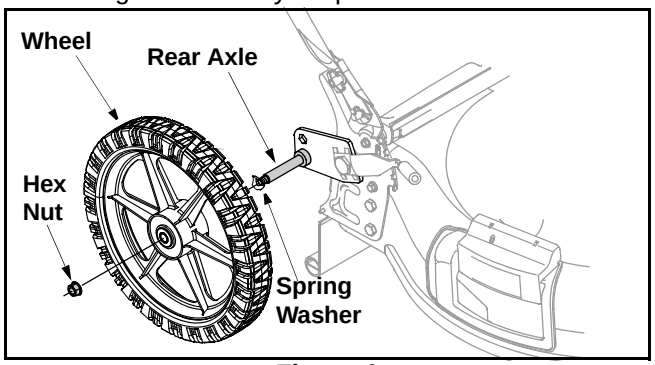


Figure 6

Attaching Starter Rope

The rope guide is already attached to the right side of the upper handle of your mower. See Figure 7.

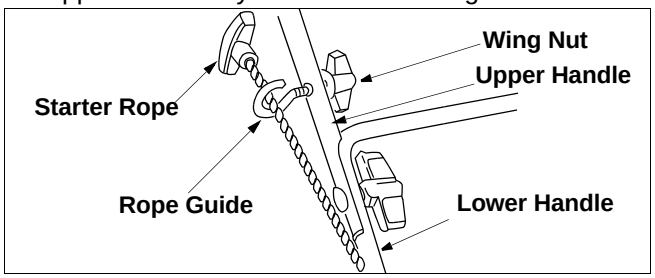


Figure 7

- With the spark plug wire disconnected and grounded, hold the blade control handle against the upper handle, and pull the rope out of the engine.
- Slip the rope through the rope guide as shown below. Tighten the wing nut holding the rope guide to the upper handle.

Assembling Grass Catcher

NOTE: *If the grass catcher came pre-assembled, proceed to the next section. If it came unassembled, follow the steps below to assemble it first, before attaching to the mower.*

- Insert frame into grass bag with the black plastic side on the bottom of bag. See Figure 8.
- Slip the openings in the side of the plastic channel on bag over the hooks on the grass catcher frame. Secure bag to the frame by working the six plastic channels on bag over frame. All of the plastic channels except the center top of the bag attach from the outside of bag. The center top of the bag attaches from inside the bag. See Figure 8.

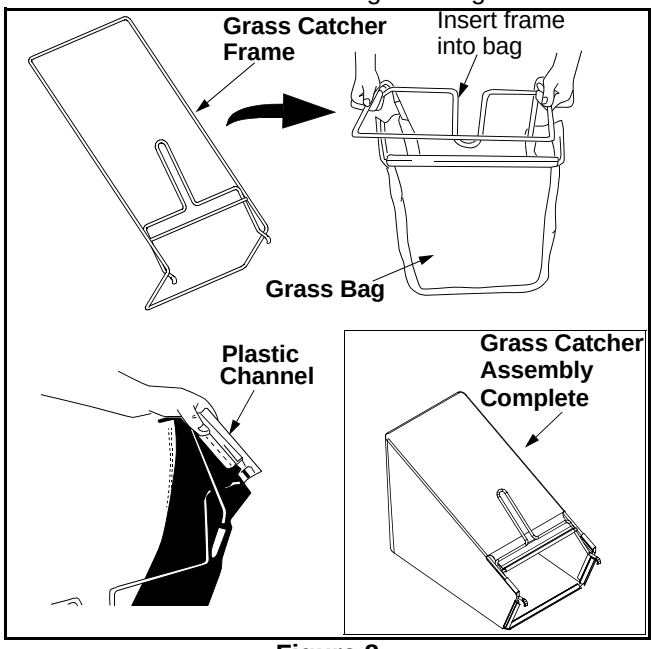


Figure 8

Attaching Hard Top Cover (If Equipped)

- Slide the hardtop cover under the grass catcher handle, positioning it so the handle rests snugly into the notch in the cover, and press the frame into the tabs at the back of the cover. See Figure 9 .

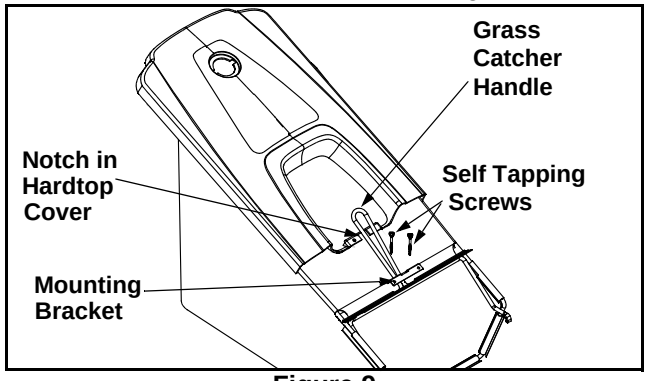


Figure 9

- Position the mounting bracket facing down between the front of the handle and the front of the

hardtop cover so that the holes in the cover line up with the holes in the bracket. Insert the self tapping screws down through the hardtop cover and mounting bracket.

Attaching Grass Catcher & Chute

WARNING: Never operate the mower unless the hooks on the grass catcher are firmly seated on the chute pivot rod, and the rear discharge door rests firmly against the top of the grass catcher.

IMPORTANT: Make sure cable is routed to the outside of the handle so that it is not in the way when attaching the grass catcher.

- Lift the rear discharge door on the mower.
- Place the hooks, found on both sides of the grass catcher frame, over the chute door pivot rod at the rear of the mower. Release the rear discharge door. See Figure 10.

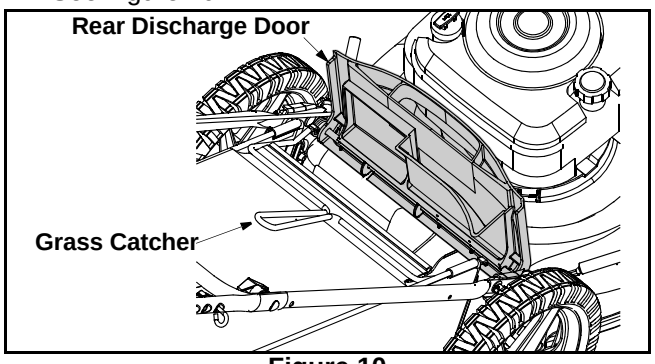


Figure 10

- To remove the grass catcher, lift the rear discharge door on the mower, lift the grass catcher up and off the pivot rod. Release the rear discharge door.

Attaching Side-Discharge Chute

- Remove the grass catcher and let the discharge door close.
- On the right side of the mower, lift the mulching plug and slide the two hooks of the side-discharge chute under the hinge pin on the mulching plug assembly. Lower the mulching plug. See Figure 11.

IMPORTANT: Do not remove the mulching plug at any time, even when you are not mulching.

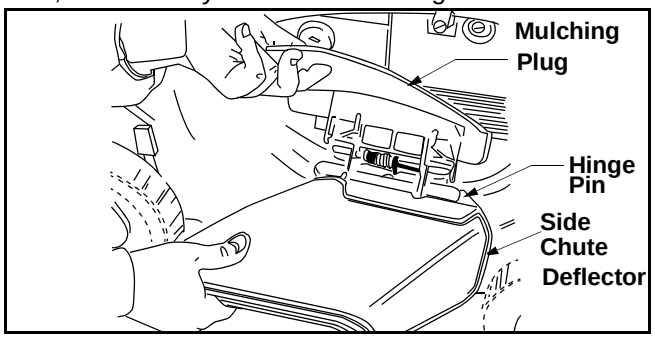


Figure 11

Using Mulch Plug

- Lift the mulch plug and remove the discharge chute up and away from the mower. Let mulch plug rest against the deck. Operate mower without the grass catcher. Refer to page 11.

SECTION 4: KNOW YOUR LAWN MOWER

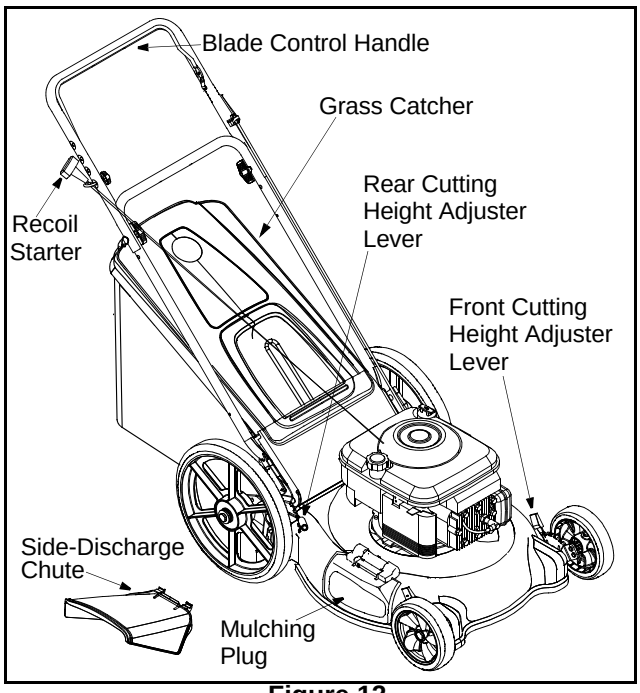


Figure 12

Read this operator's manual and safety rules before operating your lawn mower. Compare the illustration in Figure 12 with your lawn mower to familiarize yourself with the location of various controls and adjustments. Save this manual for future reference.

WARNING: The operation of any lawn mower can result in foreign objects being thrown into the eyes, which can damage your eyes severely. Always wear safety glasses while operating the mower, or while performing any adjustments or repairs on it.

Blade Control Handle

The blade control handle is located on the upper handle of the mower. The blade control handle must be depressed in order to operate the unit. Release blade control handle to stop engine and blade.

WARNING: This blade control mechanism is a safety device. Never attempt to bypass its operations.

Cutting Height Adjustment Levers

These levers are located on each wheel and are used to adjust the cutting height. These levers have to be at the same relative position to ensure uniform cut.

Recoil Starter

The recoil starter is attached to the right upper handle. Stand behind the unit and pull the recoil starter rope to start the unit.

Grass Catcher

The grass catcher, located at the rear of the mower, is used to bag the grass clippings for disposal at another site. Once the bag is full, it has to be removed from the mower and emptied before any further mowing.

Mulching Plug

Instead of collecting grass clippings in a grass catcher, this mower has the option of recirculating the clippings back to the lawn. This is called mulching. Remove the grass catcher and the side-discharge chute from the mower, and operate with the mulching plug only for this purpose.

SECTION 5: OPERATING YOUR LAWN MOWER

WARNING: Read, understand, and follow all instructions and warnings on the machine and in this manual before operating.

NOTE: *You must service the engine with oil and gasoline before starting the mower for the first time. Check oil and gasoline levels and fill up as necessary for subsequent starts.*

Gas & Oil Fill-Up

- Check oil level and add oil if necessary. Follow relevant instructions in the engine manual for this.
- Service the engine with gasoline as instructed in the engine manual.

WARNING: Use extreme care when handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Never fuel the machine indoors or while the engine is hot or running. Extinguish cigarettes, cigars, pipes and other sources of ignition.

Before Starting Mower

- Attach spark plug wire to spark plug. Make certain the metal cap on the end of the spark plug wire (inside the rubber boot) is fastened securely over the metal tip on the spark plug.

Starting Engine

- Push primer three times. Wait about two seconds between each push. In cold weather around 55° F or below, prime five times. Do not prime to restart a warm engine after a short shutdown.
- Standing behind the mower, depress the blade control handle and hold it against the upper handle.
- Grasp starter handle and pull rope out slowly until engine reaches the start of compression cycle (rope will pull slightly harder at this point). Let the rope rewind slowly.
- Pull rope with a rapid, continuous, full arm stroke. Keeping a firm grip on the starter handle, let the rope rewind slowly.

WARNING: Be sure no one other than the operator is standing near the lawn mower while starting engine or operating mower.

WARNING: Never run engine indoors or in enclosed, poorly ventilated areas. Engine exhaust contains carbon monoxide, an odorless and deadly gas.

WARNING: Keep hands, feet, hair and loose clothing away from any moving parts on engine and lawn mower.

NOTE: *See your engine manual packed with your unit for more detailed instructions.*

Stopping Engine

- Release blade control handle to stop the engine and the blade.
- Disconnect spark plug wire and move away from spark plug to prevent accidental starting.

Using Your Lawn Mower

- You can use your mower as a mulching mower or a rear bagger.
- Be sure that the lawn is clear of stones, sticks, wire, or other objects which could damage lawn mower or engine.
- *For best results, do not cut wet grass.* New grass or thick grass may require a narrower cut.

WARNING: If the mower strikes a foreign object, stop the engine. Remove spark plug wire from the spark plug and thoroughly inspect for any damage. Repair the damage promptly before restarting and operating the mower.

- For a *healthy lawn*, always cut off one-third or less of the total length of the grass.

Mulching

For effective mulching, do not cut wet grass. New or thick grass may require a narrower cut. If the grass has grown in excess of 4", mulching is not recommended. Mow using the side discharge to reduce the grass height to 3.25" maximum before mulching.

Bagging Grass Clippings

You can use the grass catcher bag to collect clippings while you are operating the mower.

- Attach grass catcher following instructions on page 9 of this manual. Grass clippings will automatically collect in the bag as you run the mower.
- Operate the mower till the grass bag is full.
- Stop engine completely by releasing the blade control handle. Make sure that the unit has come to a complete stop.
- Lift discharge door and pull grass bag up and away from the mower to dispose of the grass clippings.

SECTION 6: MAKING ADJUSTMENTS

WARNING: Do not at any time make any adjustments without first stopping engine and disconnecting spark plug wire.

Handle Height Adjustment

Your mower is shipped with the handle in the higher height position. To lower the height proceed as follows:

- Remove the starter rope from the rope guide.
- Remove the upper handle by removing the hand knobs and carriage bolts. Lay the upper handle out of the way, being careful not to bend or kink the cables.
- Remove the hairpin clips from the weld pins on the handle brackets and remove the wing nuts and carriage bolts from the upper hole on the handle mounting bracket. Press out on the legs of the lower handle and remove lower handle from the mower.
- Turn lower handle around so the notch on the bottom of the lower handle is facing forward. See Figure 13A.
- Reassemble the handle, placing the bottom holes in the handle over the weld pins in the handle mounting bracket.
- Place the hairpin clips in the inner holes in the weld pins and insert the carriage bolts though the upper hole on the handle mounting bracket and secure with plastic wing nuts. Repeat on the other side.

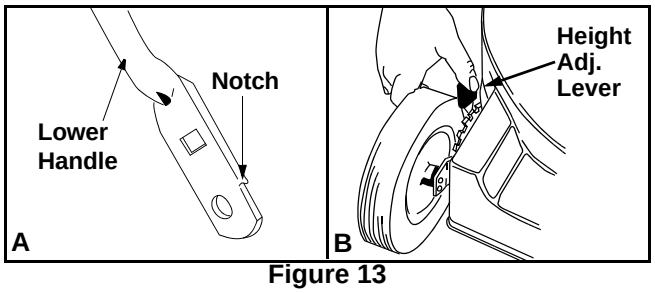


Figure 13

- Reassemble the upper handle to the lower handle.
- Attach the starter rope as instructed in the Assembly Section.

Cutting Height Adjustment

For rough or uneven lawns, move the height adjustment lever to a higher position. This will help stop scalping of the grass.

An adjusting plate and thumb lever at each wheel position provides cutting height adjustment. Each adjusting plate has nine height positions. Height of cut will change when you move the thumb lever from one position to another.

- Simply depress the lever towards the wheel and move the lever assembly to desired position. See Figure 13B. All wheels must be placed in the same relative position.

SECTION 7: MAINTAINING YOUR LAWN MOWER

WARNING: Always stop the engine and disconnect the spark plug wire before performing any maintenance work or adjustments on your lawn mower.

Cleaning Mower

The underside of the mower deck should be cleaned after each use to prevent any build-up of grass clippings, leaves, dirt, or other debris.

NOTE: *We do not recommend the use of pressure washers or garden hose to clean your unit. These may cause damage to bearings or the engine. The use of water will result in shortened life and reduce serviceability.*

- Disconnect spark plug wire. Drain the gasoline from the lawn mower, or place a piece of plastic under the gas cap.
- Tip the mower so that it rests on the housing. Keep the side with the air cleaner facing *up*. Hold the mower firmly.

WARNING: Never tip the mower more than 90 degrees in any directions and do not leave the mower tipped for any length of time. Oil can drain into the upper part of the engine causing a starting problem.

- Scrape and clean the underside of the deck with a suitable tool. Do *not* spray with water.
- Put the mower back on its wheels on the ground. If you had put plastic under the gas cap, make sure to remove it now.

Lubrication

Blade Control Handle

- Lubricate the pivot points on the blade control handle at least once a season with light oil. The blade control must operate freely in both directions.

Wheels

- Lubricate the wheels and bearings, if so equipped, at least once a season with light oil or engine oil. Also, if the wheels are removed for any reason, lubricate the surface of the pivot arm axle and the inner surface of the wheel with light oil.

Rear Discharge Door

- Lubricate the torsion spring and the pivot point on each end of the rear discharge door using a light oil. This will prevent rusting of the discharge door.

Engine Care

Follow the accompanying engine manual for detailed list and instructions.

WARNING: Make sure to avoid muffler and surrounding areas while the mower engine is hot because temperature of these areas of the engine may exceed 150° F.

SECTION 8: SERVICING THE MOWER

Blade Care

WARNING: When removing the cutting blade for sharpening or replacement, protect your hands with a pair of heavy gloves or use a heavy rag to hold the blade.

Periodically inspect the blade adapter for cracks, especially if you strike a foreign object. Replace when necessary.

Removing the Blade

- Disconnect spark plug wire from spark plug.
- Turn mower on its side making sure that the air filter and the carburetor are up.
- Remove the bolt and the blade bell support which hold the blade and the blade adapter to the engine crankshaft. See Figure 14.
- Remove the blade and the adapter from the crankshaft.

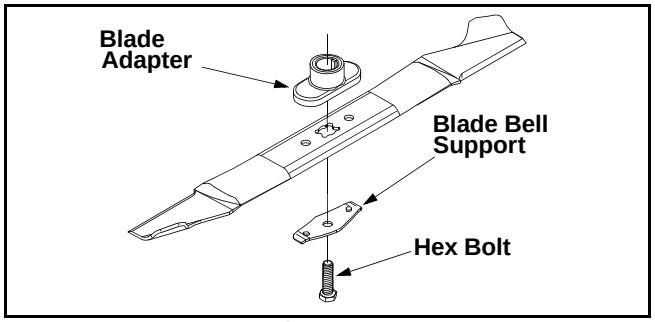


Figure 14

Sharpening the Blade

- The blade can be sharpened with a file or on a grinding wheel. Do not attempt to sharpen the blade while it is still on the mower.

- Follow the original angle of grind as a guide. Make sure that each cutting edge receives an equal amount of grinding to prevent an unbalanced blade.

WARNING: An unbalanced blade will cause excessive vibration when rotating at high speeds. It may cause damage to the mower, and could break causing personal injury.

Balancing the Blade

- The blade can be tested by balancing it on a round shaft screwdriver. Remove metal from the heavy side until it balances evenly. It is recommended that the blade always be removed from the adapter when testing for balance.

Installing the Blade

- Before reinstalling the blade and the blade adapter to the unit, lubricate the engine crankshaft and the inner surface of the blade adapter with light oil.
- Be sure to install the blade with the side of the blade marked “Bottom” (or with part number) facing the ground when the mower is in the operating position.
- Slide the blade adapter onto the engine crankshaft.
- Place the blade on the adapter. Be certain the blade is aligned and seated on the blade adapter flanges.
- Place blade bell support on blade. Make sure the notches on the blade bell support are aligned with small holes in the blade.
- Replace hex bolt and tighten hex bolt to torque: 450 in. lbs. min., 600 in. lbs. max.

NOTE: *To ensure safe operation of your mower, periodically check the blade bolt for correct torque.*

Replacing Rear Flap

- To remove rear flap, cut off the flat end of the wire rod which secures it to the deck.
- Attach the new flap and new rod to deck, bending the ends of the new rod over to secure to deck.

Storing Your Lawn Mower

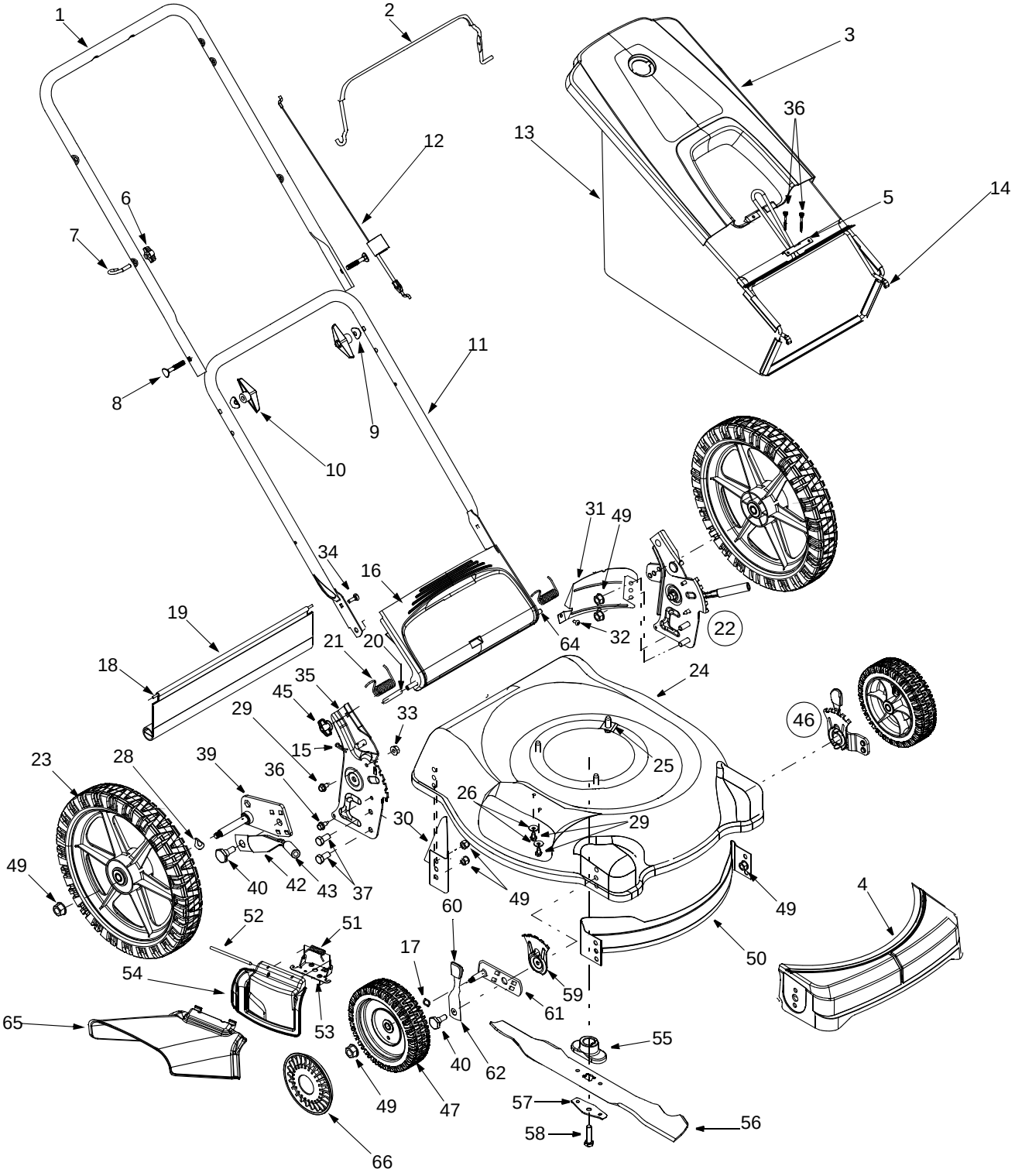
The following steps should be taken to prepare your lawn mower for storage.

- Clean and lubricate mower thoroughly as described in the lubrication instructions.
- Refer to engine manual for correct engine storage instructions.
- Coat mower’s cutting blade with chassis grease to prevent rusting.
- Store mower in a dry, clean area. Do not store next to corrosive materials, such as fertilizer.

SECTION 9: TROUBLESHOOTING

Problem	Cause	Remedy
Engine fails to start	1. Blade control handle disengaged. 2. Spark plug wire disconnected. 3. Fuel tank empty or stale fuel. 4. Blocked fuel line. 5. Faulty spark plug. 6. Engine flooded	1. Engage blade control handle. 2. Connect wire to spark plug. 3. Fill tank with clean, fresh gasoline. 4. Clean fuel line. 5. Clean, adjust gap, or replace. 6. Wait a few minutes to restart, do not prime.
Engine runs erratic	1. Spark plug wire loose. 2. Blocked fuel line or stale fuel. 3. Vent in gas plugged. 4. Water or dirt in fuel system. 5. Dirty air cleaner. 6. Carburetor out of adjustment.	1. Connect and tighten spark plug wire. 2. Clean fuel line; fill tank with fresh gasoline 3. Clear vent. 4. Drain fuel tank. Refill with fresh fuel. 5. Clean air cleaner. 6. Adjust carburetor.
Engine overheats	1. Engine oil level low. 2. Air flow restricted. 3. Carburetor not adjusted properly.	1. Fill crankcase with proper oil. 2. Remove blower housing and clean. 3. Adjust carburetor.
Excessive vibration	1. Cutting blade loose or unbalanced. 2. Bent cutting blade.	1. Tighten blade and adapter. Balance blade. 2. Replace blade.
Mower will not mulch grass	1. Wet grass. 2. Excessively high grass. 3. Dull blade.	1. Do not mow when grass is wet; wait until later to cut. 2. Mow once at a high cutting height, then mow again at desired height. 3. Sharpen or replace blade.
Uneven cut	1. Wheels not positioned correctly. 2. Dull blade.	1. Place all four wheels in same position. 2. Sharpen or replace blade.

SECTION 10: PARTS LIST FOR MODEL 549



Model 549

Ref. No.	Part No.	Part Description	Ref. No.	Part No.	Part Description
1.	749-1092A	Upper Handle	33.	712-3005	Flange Lock Nut 3/8-16
2.	747-1161A	Control Handle	34.	710-0703	Hex Carriage Screw 1/4-20
3.	731-04302	Hardtop Cover	35.	687-02033	Handle Bracket — RH
4.	731-1506	Front End Cover		687-02031	Handle Bracket — LH
5.	787-01113	Grass Bag Mounting Bracket	36.	710-1652	Self-tapping Screw 1/4-14 x.625
6.	720-0279	Handle Knob	37.	710-0216	Hex Screw 3/8-16 x 0.75
7.	710-1205	Rope Guide	39.	687-02039	Pivot Arm Assembly — RH
8.	710-1174	Carriage Bolt 5/16-18 x 2”		687-02040	Pivot Arm Assembly — LH
9.	736-0451	Shoulder Washer.320 ID x.930 OD	40.	738-0507B	Shoulder Screw
10.	720-0284	Wing Nut	42.	732-0866	Spring Lever
11.	749-0928A	Lower Handle	43.	720-0312	Spring Lever Grip
12.	746-1130	Control Cable 40”	45.	712-0397	Wing Nut
13.	664-04027	Grass Bag	46.	687-02074	Front Height Adjuster Assembly — RH
14.	747-04080	Grass Bag Frame		687-02075	Front Height Adjuster Assembly — LH
15.	714-0104	Hairpin Clip	47.	734-2004A	Front Wheel, Zag Trd. 8 x 2.125
16.	731-04134	Grass Bag Door	49.	712-0431	Flange Lock Nut 3/8-16
17.	736-0504	Wave Washer.510 x.750 x.017	50.	782-5002A	Front Baffle
18.	732-0700	Wire Rod	51.	732-1014	Torsion Spring
19.	731-1236	Trail shield	52.	747-0710	Hinge Pin
20.	750-04162	Spacer.375 O.D. x.50 I.D. x 1.02”	53.	17032A	Chute Deflector Adapter
21.	732-04090	Torsion Spring — RH	54.	687-02055	Mulching Plug
	732-04089	Torsion Spring — LH	55.	748-0376C	Blade Adapter
22.	687-02066	Handle Bracket Assembly — RH	56.	742-0741	21” Mulching Blade
	687-02065	Handle Bracket Assembly — LH	57.	736-0524A	Blade Bell Support
23.	734-2043	Wheel, Zag Tread, Yellow 14 x 2.125	58.	710-1044	Hex Cap Screw 3/8-24 x 1.5
24.	787-01104	Deck 21”	59.	15261A	Height Adjustment Plate
25.	710-0654A	Hex Washer Screw 3/8-16 x 1.0	60.	720-0426	Knob
26.	736-0270	Bell Washer.265 ID x.75 OD	61.	687-02077	Pivot Arm Assembly — RH
28.	736-0182	Spring Washer.500 x 1.00 x.022		687-02076	Pivot Arm Assembly — LH
29.	710-0599	Screw 1/4-20 x.500	62.	732-0404	Spring Lever
30.	782-5004A	Rear Baffle - RH	64.	747-0996	Chute Door Pivot Rod
31.	782-5003	Rear Baffle - LH	65.	731-04177	Side Discharge Deflector
32.	710-1017	Tap Screw 1/4-14 x.625.	66.	731-1426A	Hubcap Radial Spoke Yellow

MANUFACTURER'S LIMITED WARRANTY FOR:

The limited warranty set forth below is given by MTD LLC with respect to new merchandise purchased and used in the United States, its possessions and territories.

"MTD" warrants this product against defects in material and workmanship for a period of two (2) years commencing on the date of original purchase and will, at its option, repair or replace, free of charge, any part found to be defective in materials or workmanship. This limited warranty shall only apply if this product has been operated and maintained in accordance with the Operator's Manual furnished with the product, and has not been subject to misuse, abuse, commercial use, neglect, accident, improper maintenance, alteration, vandalism, theft, fire, water, or damage because of other peril or natural disaster. Damage resulting from the installation or use of any part, accessory or attachment not approved by MTD for use with the product(s) covered by this manual will void your warranty as to any resulting damage.

Normal wear parts are warranted to be free from defects in material and workmanship for a period of thirty (30) days from the date of purchase. Normal wear parts include, but not limited to items such as: batteries, belts, blades, blade adapters, grass bags, rider deck wheels, seats, snow thrower skid shoes, shave plates, auger spiral rubber and tires.

HOW TO OBTAIN SERVICE: Warranty service is available, WITH PROOF OF PURCHASE, through your local authorized service dealer. To locate the dealer in your area, check your Yellow Pages, or contact MTD LLC at P.O. Box 361131, Cleveland, Ohio 44136-0019, or call 1-800-800-7310 or log on to our Web site at www.mtdproducts.com.

This limited warranty does not provide coverage in the following cases:

a. The engine or component parts thereof. These items may carry a separate manufacturer's warranty. Refer to applicable manufacturer's warranty for terms and conditions.
b. Log splitter pumps, valves, and cylinders have a separate one year warranty.
c. Routine maintenance items such as lubricants, filters, blade sharpening, tune-ups, brake adjustments, clutch adjustments, deck adjustments, and normal deterioration of the exterior finish due to use or exposure.
d. Service completed by someone other than an authorized service dealer.
e. MTD does not extend any warranty for products sold or exported outside of the United States, its possessions and territories, except those sold through MTD's authorized channels of export distribution.
f. Replacement parts that are not genuine MTD parts.
g. Transportation charges and service calls.

No implied warranty, including any implied warranty of merchantability of fitness for a particular purpose, applies after the applicable period of express written warranty above as to the parts as identified. No other express warranty, whether written or oral, except as mentioned above, given by any person or entity, including a dealer or retailer, with respect to any product, shall bind MTD. During the period of the warranty, the exclusive remedy is repair or replacement of the product as set forth above.

The provisions as set forth in this warranty provide the sole and exclusive remedy arising from the sale. MTD shall not be liable for incidental or consequential loss or damage including, without limitation, expenses incurred for substitute or replacement lawn care services or for rental expenses to temporarily replace a warranted product.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

In no event shall recovery of any kind be greater than the amount of the purchase price of the product sold. **Alteration of safety features of the product shall void this warranty.** You assume the risk and liability for loss, damage, or injury to you and your property and/or to others and their property arising out of the misuse or inability to use the product.

This limited warranty shall not extend to anyone other than the original purchaser or to the person for whom it was purchased as a gift.

HOW STATE LAW RELATES TO THIS WARRANTY: This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

IMPORTANT: Owner must present Original Proof of Purchase to obtain warranty coverage.

MTD LLC, P.O. BOX 361131 CLEVELAND, OHIO 44136-0019; Phone: 1-800-800-7310